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Voting for Wage Concessions: The Case of the 1982 GM-UAW Negotiations

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VOTING FOR WAGE CONCESSIONS: THE CASE OF THE 1982 GM-UAW NEGOTIATIONS

BRUCE E. KAUFMAN and JORGE MARTINEZ-VAZQUEZ*

The authors of this paper use the median voter model to predict the patterns of rank-and-file voting on wage concessions in a multiplant setting, then test those predictions using data from the 1982 GM-UAW negotiations. The model predicts that workers in plants with large layoffs will vote in favor of a wage concession *only* if they believe that a concession will save their jobs. Surprisingly, workers in plants with growing or stable employment are also actually more likely to vote Yes. A third prediction is that the Yes vote will be smallest in plants with the most adversarial labor relations. The empirical analysis supports all three predictions.

ONE of the most important industrial relations developments of the 1980s has been the emergence and spread of concession bargaining. Mitchell (1985) estimates that between 1980 and 1984, one-third to one-half of all unionized workers were covered under new contracts that froze or cut wage rates. Many other employers demanded wage concessions but were unable to obtain them. In a number of cases, in fact, union workers

voted down concessions even when the employer threatened to close the plant or declare bankruptcy if wage relief was not given (see Easterbrook 1983).

Despite the prevalence of concession bargaining, there has been relatively little research on the factors that influence a union's policy toward granting wage concessions. To the best of our knowledge, the only case study of union wage concessions to be published in the last ten years is Cappelli's (1985) analysis of concession bargaining in the meat packing and tire industries. His study, however, focused primarily on whether a union will agree to negotiate over concessions, not whether concessions are actually accepted. As we shall show, this distinction is an important one. In earlier years, by way of contrast, a number of case studies of union wage policy in a crisis situation were published (Herrnstadt 1954; Levinson 1960; Greenberg 1968; Juris 1969). But although these studies contributed a number of insights about union attitudes toward concession bargaining, none developed a formal model of union wage policy from which

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EDITOR'S NOTE: Although this article, and the one following, deal with the same subject—the determinants of contract ratification votes in the auto industry—and analyze similar voting data, they were prepared quite independently of each other. By a happy coincidence, however, both papers were submitted to the *Review*, and later accepted, at about the same time. We thought it would be interesting to ask each set of authors to compare the two papers, and they have done so in comments that appear following the second paper.

hypotheses could be deduced and tested, nor did any perform a quantitative analysis of the factors that influence union members to vote for or against concessions in the contract ratification process.

In this paper we attempt to fill these gaps in the literature by studying the wage concession negotiated between the General Motors Corporation and the United Automobile Workers Union in April 1982. This analysis is unique in several respects. First, previous studies have focused on concession bargaining at the level of the individual plant; this study examines concession bargaining in a multiplant firm with more than 170 separate bargaining units. Second, we use a median voter model of union behavior to derive hypotheses concerning the pattern of voting in a multiplant setting such as at GM. Several of these hypotheses are noteworthy, we believe, because they contradict conventional wisdom as to which bargaining units should be most likely to vote for and against wage concessions. A third feature of the paper is that these hypotheses are tested through a regression analysis of the voting pattern among the UAW bargaining units in the 1982 GM ratification vote. To the best of our knowledge, no previous published study has examined actual voting data from a union contract ratification.

Background to Concessions

Over most of the post-World War II period the UAW was able to win wage and benefit increases for its members at General Motors and the other auto producers that substantially exceeded the economy-wide average. Between 1950 and 1980, for example, the ratio of hourly earnings of auto assemblers to production workers in the private nonagricultural economy rose from 1.18 to 1.55 (Katz 1985:21). Factors contributing to the union's bargaining success included an inelastic labor demand curve in the auto industry, strong secular growth in auto sales, and the union's ability to impose large strike costs on the producers.

Although there were signs of trouble when the 1979 auto contracts were signed, particularly given the perilous financial condition of Chrysler, neither the auto companies nor the union could foresee the severity of the economic crisis that lay ahead. Auto production peaked in 1978 at 9.2 million units, and then began to slide. In 1979 production was off only moderately (8.1 million), but by 1982 it had plummeted to 5.1 million units. The most important reasons for the decline in domestic auto sales were the shift in consumer demand to compact and subcompact cars due to the oil price shocks (see Hunker 1983), the recessions of 1980 and 1981-82, and the double-digit interest rates.

As sales declined, so did employment. At General Motors, employment of hourly workers plunged by one-third between 1979 and 1982. At the time of the concession vote in April 1982, 140,000 GM workers were on indefinite layoff. The decline in employment was not evenly spread across plants, however: some were hit far worse than others. Of GM's 25 assembly plants, for example, between 1979 and 1982 six closed, five were reduced from two shifts to one, five kept two shifts but reduced the line speed, and eight maintained production at 1979 levels.¹

In the fall of 1981 Ford and GM asked the UAW to reopen the national contract, but the union refused. By early 1982, however, the crisis had deepened enough that the union reluctantly agreed. Facing the union leadership were the following facts. First, in February 1982 car sales hit the lowest level since 1948, with no upswing in sight. Second, indefinite layoffs in the auto industry had been above 150,000 for two years. Many laid-off workers, therefore, had exhausted their SUB payments, with little prospect of re-employment in the industry. Third, in February GM announced seven plant closings. Finally, there was a growing

¹ These data come from *Ward's Automotive Yearbook* (1980:106; 1983:69).

realization on the part of the union leaders that the crisis in the industry would not completely disappear when the recession ended, but rather was the result of fundamental structural changes that opened up the high-cost domestic industry to much greater competition. One response of the union was to try to limit competition from foreign producers through legislative enactment of a domestic content bill and stricter import quotas. Since both proposals faced considerable opposition from the Reagan administration, the UAW leadership realized that at least part of the solution to the industry's problems would have to come from concessions at the bargaining table.

The GM Concession Contract

In March 1982 the UAW Executive Council and the General Motors Corporation announced agreement on a new contract that contained significant cost concessions on the union's part. An important consideration for GM was that several weeks earlier a similar pact had been reached at Ford. The contract was a 30-month agreement. The union agreed to a freeze of base wage rates, elimination of the annual improvement factor (an annual 3 percent deferred wage increase), postponement of cost of living (COLA) payments, and elimination of all paid personal holidays (9 per year). The savings in labor cost to General Motors over the life of the contract was estimated at 10 percent of current labor cost, or about \$2 per hour.² Also of significance was the agreement by the union that individual locals could reopen plant-level supplemental contracts if a revision of work rules or work practices would make it possible for the company to continue production at the plant.

In return for these concessions, the

company made a number of commitments to the union. First, GM agreed to rescind the announced closing of four plants, and instituted a 24-month moratorium on other plant closings related to outsourcing. Second, the company established a profit sharing program. Third, a "Guaranteed Income Stream" program (GIS) was established that guaranteed 50 percent or more of hourly earnings until age 62 for two categories of worker: those employed as of March 1, 1982, with 10 years or more of seniority, who were laid off due to plant closings, and those employed as of the same date who had 15 years or more of seniority and were laid off for any other reason. Finally, the company also agreed to advance up to \$200 million to the SUB fund and to begin a lifetime employment experiment at four plants.

Opinion in the UAW about the concession contract was sharply split. The national leadership attempted to sell the package to the membership by stressing the improved job security the contract would bring and the projected payments from the profit sharing program. In this spirit, union president Douglas Fraser endorsed the contract as a way to "stop the hemorrhaging of GM workers' jobs" by allowing GM to be more cost-competitive with the Japanese. The headline of the union's newspaper to the GM membership declared "Contract to Save Thousands of Jobs."

There was, however, also considerable opposition to the concession contract in the union. A group called "Locals Opposed to Concessions" (LOC) actively lobbied the membership to vote against the contract. According to LOC, "This contract contributes nothing to job security, and actually will cost our members 10,000 jobs as well as \$3 billion dollars in wages and benefits." In support of this contention, LOC argued that the elimination of the paid personal holidays meant that existing employees would be working 4 percent more hours, allowing the company to cut employment by 10,000 workers; the GIS program would do nothing for the 140,000 GM workers on layoff,

² The material in this section is drawn from the United Automobile Workers Union newspaper, *UAW-GM Report* (March 1983), and a pamphlet, *Analysis: General Motors Settlement* (1982), put out by Locals Opposed to Concessions (UAW-LOC).

since it only protected workers employed as of March 1, 1982; the agreement by the union to allow individual locals to reopen plant-level agreements would decrease job security, since locals would become involved in a bidding war for additional work; and the precarious financial position of the companies was not due to excessive labor cost but was the result of management waste and inefficiency and external economic conditions such as the rise in gas prices, double-digit interest rates, and the overvalued dollar.

The concession contract was put to a vote of the membership in April 1982. Under the UAW constitution, both employed and laid-off members were eligible to vote. The contract was narrowly approved by a 52 percent majority. Of the 170 bargaining units at GM, 116 voted for the concessions and 54 voted against it. Although the bargaining units voting against concessions were distinctly in the minority, within those units the average No vote was 70 percent.

Theoretical Model

The voting outcome on the GM contract concession raises two interesting questions. First, what factors determine whether a majority of the rank and file at the company will vote for or against a wage concession? Second, what factors explain the pattern of voting among the bargaining units? An answer to these questions requires a theoretical model of union behavior. Although there are several such models in the literature, the most appropriate, in our opinion, is the median voter model, since it explicitly captures the political nature of union decision-making and the inherent conflict of interests that exists among the union membership over the desirability of a wage cut.³ A median

voter analysis of union wage concessions was undertaken in Kaufman and Martinez-Vazquez (1987) for the case of a single-plant bargaining structure. In this section we adapt that model to the case of a union with multiple bargaining units.

As originally shown by Bowen (1943), if elections are decided by simple majority rule and preferences are well ordered (single-peaked) and a function of a single variable, the preference of the median voter in the electorate is the outcome that will defeat all others in a sequence of pairwise elections. To apply the median voter model to union wage concessions, several assumptions are necessary. After listing these assumptions, we derive the implications of the model concerning the two questions we are trying to answer: What are the determinants of (1) the approval or rejection of the concession by the majority of the membership and (2) the support it receives from different bargaining units? We then critically examine the assumptions of the model and how its implications change when some of the original assumptions are relaxed.

First, it is assumed that new contracts must be ratified by a majority of the rank and file and that the electoral process in the union allows a series of elections among all possible pairs of outcomes. Second, it is assumed that the wage rate is the only issue in the negotiations, and that each employed union member is treated equally (i.e., there are no side-payments). Third, it is assumed that there is a well-known order of layoff for all UAW members at General Motors; the determinants of this order are described below. Finally, it is assumed that the union leadership, out of a political instinct for survival, actively pursues policies that will

³ Other models of union behavior include the monopoly model and the efficient contract model (see MaCurdy and Pencavel 1986). Several fundamental features, however, render these models inadequate to study union acceptance of wage concessions. First, both the monopoly and efficient contract models assume identical preferences among the rank and file for the union's wage policy. Quite clearly,

this assumption is untenable both within a bargaining unit and across units. Second, neither of the two models recognizes that union decisions are the result of a political process involving majority rule. Therefore, the monopoly and efficient contract models cannot be used to explain the nature of the coalition within a union that would favor a concession or to predict unambiguously when the union will accept such a policy.

receive the support of a majority of the rank and file.

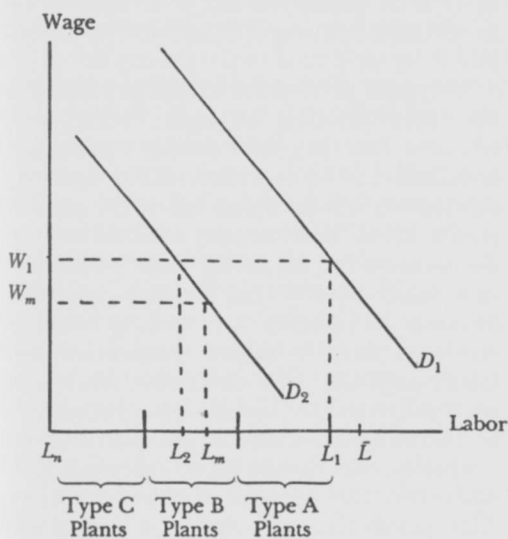
The implications of the model can now be derived with the help of Figure 1. Let D_1 represent the labor demand curve for General Motors in 1979. Given the union wage of W_1 , total employment was L_1 ; $L_1 - \bar{L}$ represents the number of laid-off workers at that date. We assume that the L_1 employed workers can be ordered along the horizontal axis on the basis of their order of potential layoff, the L_1 st worker being the first to lose his or her job, the L_n th being the last. Two assumptions give rise to this rank ordering. First, within a plant we assume, following the actual practice at GM, that the order of layoff is by seniority. Second, we assume that across plants there is also a distinct order of layoff based on differences in the marginal cost of production, with layoffs and shutdown taking place first at the

highest-cost plant, then at the next highest-cost plant, and so on. We will attempt to justify that assumption more fully below.

Because of the economic events outlined above, the labor demand curve at General Motors between 1979 and 1982 shifted to the left as represented by the demand curve D_2 , and at the prevailing wage of W_1 , employment fell to L_2 . We can consider now the first question—will the rank and file agree to a wage concession?

Assume that the median union member in terms of the order of layoff is the L_m th worker. As shown in Kaufman and Martinez-Vazquez (1987), a *necessary* condition for a majority Yes vote is that the median voter be threatened with unemployment if there is not a wage concession. Only then will a majority of the union membership find it in their self-interest to accept a wage cut in order to preserve their jobs. Given the way Figure 1 is drawn, this condition is satisfied, since the $L_2 - L_1$ layoffs include the median. The second condition that is necessary for majority approval of a wage cut is that the median voter's new preferred wage W_m still yields him or her a higher level of utility than any other alternative outcome (such as quitting and finding a new job or early retirement). Thus, if the median member could find other employment paying a wage higher than W_m , he or she would be better off to vote against the concession, even though it means losing the present job. The sufficient condition cannot be directly shown in Figure 1. If both conditions are satisfied, a proposed wage concession from W_1 to W_m would win majority approval by one vote in excess of 50 percent of the rank and file. Note that any other wage proposed by the leadership would be defeated by W_m in a sequence of pairwise elections.

Consider now the second question: What determines why some bargaining units voted heavily for the concession contract whereas others voted heavily against it? This question can also be answered with the help of Figure 1. To do so, we must explicitly focus on employment prospects in different plants of the company. To keep the graphical analysis



Type A plants = plants experiencing massive layoffs.
 Type B plants = plants experiencing some layoffs.
 Type C plants = plants with steady employment.
 \bar{L} = total union membership.
 L_1 = employed membership at wage W_1 .
 L_2 = employed membership at wage W_1 after demand decreases to D_2 .
 L_m = median union member.
 W_m = preferred wage of median member given demand curve D_2 .

Figure 1. Pattern of Voting Among Union Members on a Tentative Wage Concession Agreement.

manageable, we assume that each GM plant is one of three possible types, represented by Plants A, B, and C in Figure 1. Given the new demand curve D_2 , type A plants (the high-cost plants) either are shut down or suffer massive layoffs, type B plants continue to operate but suffer some layoffs, and type C plants continue to operate with 1979 levels of employment. Although the assumption that there are only three types of plants clearly would be arbitrary in some circumstances, most plants at General Motors in the 1980–82 period did (as described above) fall into one of these three groups.

Let us assume for the sake of argument that, as in Figure 1, the number of layoffs includes the median voter (the L_m th), and also that the sufficient condition is satisfied so that a majority of workers in the company will support a concession from W_1 to W_m . Support for the concession, however, will be quite different among the three types of plants.

A key insight provided by the median voter model is that the majority coalition of the membership in favor of concessions extends from the top of the layoff distribution (the L_n th worker) down to the median (the L_m th). Surprisingly, although the political pressure on the union leadership to negotiate concessions comes from the $L_2 - \bar{L}$ laid-off workers, the workers below the median are the ones who in the actual vote will oppose concessions. The reasoning is straightforward. The $L_m - \bar{L}$ laid-off workers will vote against a wage concession because at the wage W_m they will still remain unemployed. The $L_n - L_m$ workers, on the other hand, would vote for the concession.

The rationale for a Yes vote on the part of the $L_2 - L_m$ workers is self-evident—a wage cut from W_1 to W_2 saves their jobs. The remainder of the majority coalition in favor of concessions comes from the $L_n - L_2$ workers, who would keep their jobs even without a concession. The reason these workers would vote for a wage cut to W_m is that if they did not the median voter could, in a continuous sequence of elections, form a different majority coalition of union members (such as those in the lower half of the layoff

distribution) who would support a *larger* wage cut than W_m . Given the inevitability of the concession, the $L_n - L_2$ workers, therefore, support W_m only because it minimizes the pay cut they will have to accept.

The implications of the model for the voting pattern among bargaining units can be summarized as follows. Contrary to what might be expected, the vote in type A plants (the plants that suffered massive layoffs and in which a wage cut would not save jobs) should be overwhelmingly *opposed* to concessions. Because these plants lost so many jobs, their workers would support the initial decision to negotiate a concession. Thus, as Cappelli (1985) claims, the likelihood that a plant will agree to *negotiate* a concession increases with the number of layoffs experienced by the plant's union members. Our model shows, however, that in the *actual vote* the workers in type A plants would vote against the concession because it would not save their jobs.

In type B plants, the model predicts that the vote should be split, with some workers favoring and others opposing a concession. The workers voting against a concession will be those below the median in the layoff distribution who do not see the concessions as being large enough to save their jobs. Voting for the concession in type B plants are two groups of workers: those who are threatened with layoff and see the concession as saving their jobs, and those who have secure jobs but want to avoid any larger cut in wages.

Finally, the vote in type C plants should be consistently in *favor* of the concessions. This prediction also seems counterintuitive, since type C plants have experienced no layoffs.⁴ But even though none of these workers will lose their jobs if a concession is defeated, they reluctantly vote for a wage cut to W_m to avoid an even bigger concession.

Qualifications. The predictions derived so far are based on assumptions that in

⁴ This prediction is also unexpected since, as argued by Cappelli (1985), the workers in type C plants are the ones who are most likely to oppose the initial decision to negotiate a concession.

some cases clearly do not fully match the case under study (the UAW and General Motors in 1982). We therefore need to discuss how relaxing these assumptions affects the predictions of the model.

The first assumption concerns the nature of the electoral process. Rather than a sequence of pairwise elections, the electoral process in the GM-UAW negotiations is limited to one or at most a few votes. This fact has a large impact on the predicted voting pattern. The motivation for the workers with relatively secure jobs in type C plants to vote for the concession is that if they do not, the majority of laid-off workers could form a new coalition and win a majority vote for an even larger wage cut. If, to take the extreme case, there were only one election, the pressure on type C plant workers to vote Yes would be removed—they could vote No and keep their jobs at the wage W_1 with no threat of another vote. Given less than perfect democracy, therefore, the union leadership faces a serious problem in gaining a majority Yes vote, since many workers with job security may defect to the side opposing a concession.

The limited nature of the electoral process leads to a second consideration ruled out in the simple model—the possibility of side-payments. As just noted, one problem facing the union leadership is that with only one or several votes, many secure workers might vote against the concession. One possible strategy on the leadership's part is to "buy" the votes of the secure workers by making side-payments. One example of side-payments in the GM-UAW contract is the GIS program, for which only currently employed workers with high seniority were eligible. A second example is the profit sharing program, again with value only for currently employed workers. Paradoxically, although the ultimate objective of the concession contract is to protect union members suffering (or threatened with) the hardship of being laid off, the contract is written to discriminate against them and to benefit those with more secure jobs. An implication of the model, therefore, is that the No vote in type A plants will also be due to resentment over the perceived

inequity in the distribution of benefits among the union rank and file.

A third consideration is the role of uncertainty. Heavily influencing each worker's vote are the questions whether he will be laid off (how far to the left the labor demand curve will shift) and whether a wage concession will save his job (how elastic the labor demand curve is). Although in the model the answers to these questions were assumed to be known with certainty, in the context of the economic events of 1980–82 they were most likely shrouded in uncertainty.

This uncertainty affects the model in two ways. First, the necessary condition for acceptance of a wage concession changes slightly—it is not necessary that a majority of the membership actually lose their jobs at the prevailing wage W_1 , but only that a majority perceive a threat to their jobs. Second, as Ross (1948:80–93) emphasized, the typical union member is likely to have a very imprecise guess as to what the labor demand curve's position and its elasticity are. Of course, the greater the perceived elasticity of demand, the more jobs a wage concession will be thought to save and the bigger the Yes vote. One factor affecting each worker's subjective estimate of the elasticity of demand will be the attitude of his local president toward the concession. Presumably, the local president would favor the concession if he thinks that it would save or increase jobs in the unit. A second factor will be the labor relations climate in the plant—the more adversarial that climate, the more the workers will distrust the company and its claims that a cut in wages will save jobs. Of course, the company can directly affect the worker's estimate of the job-saving potential of a concession if, as at GM, it promises in advance that certain plants will not be closed.

A final consideration is the number of issues in the contract. To derive a unique voting outcome, one of the necessary assumptions in the median voter model is that there is only one issue in the election. In the GM-UAW contract, however, the wage rate was only one of numerous contract provisions; some of the others were the GIS program, the profit sharing

program, the moratorium on plant closings, and the cut in paid personal holidays. With so many issues open to vote, in a sequence of elections, the median voter model would generally produce no single winner, but a series of cyclical majority coalitions. But if the election process were restricted to one single vote (the particular contract submitted by the UAW leadership), we would expect support for the contract to vary across plants according to our analysis above.

Empirical Analysis

The model developed in the previous section suggests a number of hypotheses concerning the pattern of voting among UAW bargaining units in the 1982 negotiations. In this section we use regression analysis to test these hypotheses. The data, as explained more fully below, came largely from a survey questionnaire answered by the chairperson of each bargaining unit. The specification of the regression is

$$(1) \ln[\text{PYES}/(1 - \text{PYES})] = \beta_0 + \beta_1 \text{EMP} \\ + \beta_2 \text{SAVE} + \beta_3 \text{EMP} \cdot \text{SAVE} + \beta_4 \text{THREAT} \\ + \beta_5 \text{CLOSE2} + \beta_6 \text{CLOSE3} + \beta_7 \text{REL2} \\ + \beta_8 \text{REL3} + \beta_9 \text{SUPPORT} + \beta_{10} \text{PARTS} \\ + \beta_{11} \text{WCOLLAR} + \beta_{12} \text{OTHER} \\ + \beta_{13} \text{YEAR} + \beta_{14} \text{UN} + \beta_{15} \text{WAGE} + \epsilon.$$

The unit of observation is the bargaining unit. On the left-hand side of the equation, PYES is the percentage of votes in favor of the concessions. Estimation of the equation with PYES as the dependent variable using OLS could yield not only inefficient estimates but also predicted values outside the zero-one range. To control for these difficulties, we employ logit-weighted regression analysis in which the dependent variable is the natural log of the odds.⁵ The definitions and means of the independent variables are given in Table 1.

The data source for the voting results was the official tally furnished by UAW

national headquarters. The data for the independent variables (except UN and WAGE) were obtained from a questionnaire mailed in early 1983 to the chairperson of each bargaining unit. A total of 102 usable questionnaires were returned, representing a relatively high response rate of 60 percent. The mean of the variable PYES for our sample was 55.5 percent, which is not statistically different (by a *t* test) from the population mean. Other characteristics of the two distributions were also quite similar.⁶

The regression results, reported in Table 2, show an interesting voting pattern across bargaining units. They also lend support to the predictions of the model. Consider first the variables EMP, SAVE, and EMP·SAVE. The inducement for the membership to vote Yes for the concession is the prospect that the concession will save jobs. The positive and statistically significant coefficient for SAVE shows that the vote for the concession was, in fact, much higher in bargaining units where the membership believed jobs would be saved.⁷ The negative coefficient on the

⁶ For example, the standard deviations were 21.2 and 22.1 for the sample and population mean, respectively. The skewness and Kurtosis measures were, respectively, $-.109$ and $-.175$, and $-.637$ and $-.524$. The range was 85.8 for the sample and 95.1 for the population.

⁷ The content validity of the variable SAVE is admittedly subject to some question, since the data came from an *ex post* response of the chairperson rather than a survey of the membership prior to the vote. Although the questionnaire specifically asked the chairperson to assess the membership's belief concerning whether jobs would be saved, it is possible that the response we obtained reflected only the chairperson's own personal opinion. If the chairperson's opinion varied significantly, on average, from the membership's, the resulting measurement error would bias the estimated coefficient on the variable SAVE toward zero. The coefficient is, however, significantly different from zero.

It is also possible that the membership had no idea of whether jobs would be saved and simply relied on the opinion of the chairperson in making up their mind whether to vote Yes or No. The fact that other variables besides SUPPORT were statistically significant, and that the correlations between SUPPORT and PYES and SUPPORT and SAVE were far from perfect ($-.53$ and $.45$), suggests that the position of the chairperson and the voting of the membership were

⁵ The weights used in the weighted least squares regression were computed as: $[N_j \cdot \text{PYES}_j / (1 - \text{PYES}_j)]^{1/2}$. See Theil (1971).

Table 1. Variable Definitions and Means.

<i>Variable Name</i>	<i>Definition</i>	<i>Mean</i>
PYES	Percent of votes cast in the bargaining unit in favor of the concessions.	55.44
EMP	Algebraic value of the percentage change in employment over the preceding year (e.g., -20% or +10%).	-10.58
SAVE	Dummy variable equal to one if the chairperson reported that at the time of the vote "membership believed the contract concessions would save jobs in their bargaining unit." The omitted category is "concessions would not save jobs."	.45
EMP • SAVE	Interaction term.	.22
THREAT	Dummy variable equal to one if a plant in the bargaining unit was one of the four that GM promised not to close if the concessions were approved.	.01
CLOSE2	Dummy variable equal to one if "membership worried somewhat" about the plant closing.	.33
CLOSE3	Dummy variable equal to one if "membership worried a lot" about the plant closing. The omitted category is "membership not worried much."	.18
REL2	Dummy variable equal to one if "the relationship between the union and company, compared to other bargaining units, is about average."	.43
REL3	Dummy variable equal to one if "the relationship between the union and company is worse than average." The omitted category is "relations better than average."	.15
SUPPORT	Dummy variable equal to one if "the chairperson personally opposed the contract concessions." The omitted category is "chairperson supported concessions."	.34
PARTS	Dummy variable equal to one if "workers are primarily engaged in parts manufacture."	.41
WCOLLAR	Dummy variable equal to one if "workers are primarily engaged in R&D or 'white collar' jobs."	.08
OTHER	Dummy variable equal to one if workers are engaged in "other" (e.g., warehousing, locomotive manufacture) jobs. The omitted category is "car and truck assembly."	.27
YEAR	Year the plant or facility was built (calculated as year - 1900)	49.7
UN	Unemployment rate in April 1982 in the state in which the bargaining unit is located.	11.98
WAGE	Average hourly earnings in 1982 in the SMSA or, if SMSA-level earnings figures are not available, in the state.	10.06
ϵ	Random error term.	

interaction term EMP•SAVE indicates that the prospect of saving jobs had a larger positive impact on the percent Yes vote in bargaining units that had previously suffered large declines in employment than in other units. This result supports one of the basic predictions of the model—that a large Yes vote will occur in bargaining

indeed influenced by a consideration of benefits and costs as predicted by the median voter model.

Finally, a third possibility is that the chairperson's response about the membership's belief concerning the number of jobs likely to be saved by the concession was merely a post hoc rationalization of how the membership voted. This assertion is difficult to disprove, but we would note that the correlation between PYES and SAVE (.45) is much less than 1.0.

units where large layoffs occur and the membership believes that a concession will restore jobs (type B plants in the model).

A second important prediction of the model is that the weakest support for the concessions will be in bargaining units that had suffered large layoffs but in which the membership did *not* believe jobs would be saved by concession (type A plants). This prediction is also supported by the results. When SAVE is set equal to zero (and thus EMP•SAVE = 0) in Table 2, it is seen that the larger the decline in employment over the previous year (EMP takes negative values), the lower the percent Yes vote. If SAVE is set equal to one (implying the membership believed jobs would be saved),

Table 2. Determinants of the 1982 GM-UAW Concession Vote.
(logit-weighted regression results)

Independent Variable	Estimated Coefficient	t-statistic
EMP	0.313×10^2	4.27*
SAVE	0.454	7.86*
EMP*SAVE	-0.103×10^{-1}	6.09*
THREAT	1.371	3.65*
CLOSE2	0.111	2.91*
CLOSE3	0.257	4.82*
REL2	-0.425×10^{-1}	1.10
REL3	-0.269	5.11*
SUPPORT	-0.532	12.55*
PARTS	0.469×10^{-1}	1.06
WCOLLAR	0.338	3.64*
OTHER	0.137	2.58*
YEAR	-0.273×10^{-2}	2.67*
UN	-0.183×10^{-1}	2.42*
WAGE	0.278×10^{-2}	4.72*
Constant	-0.183	—
$R^2 = 0.447$	$\bar{R}^2 = 0.442$	$F = 78.44$

* Significant at the .05 level.

however, bargaining units with large employment losses were *more* likely to vote for the concessions.⁸ Finally, perhaps the most counterintuitive result but one predicted by the model is that bargaining units that had experienced a growth in employment (type C plants in the model) also were more likely than other plants to vote for the concession (EMP takes positive values).⁹ Next, consider the variables THREAT, CLOSE2, and CLOSE3. The coefficient on the

variable THREAT is positive and statistically significant, indicating that the percent Yes vote was higher in those plants that GM threatened to close if concessions were not approved than in other plants. The relationship between a cut in wages and increased employment opportunities was quite clear for these bargaining units, and, not unexpectedly, they voted heavily in favor of the concession. The coefficients on the variables CLOSE2 and CLOSE3 were also positive and significant. The degree of support for the concessions increased if the members of the bargaining unit were somewhat worried about the plant closing and rose even further if they were quite worried. These results suggest that union members threatened by layoffs (i.e., those in type B plants) regarded the concession as a way to protect their jobs from a plant closing.¹⁰

According to the model, a key determinant of the amount of support among the membership for a concession is the degree to which they believe both that a concession is necessary to protect their jobs and that it will increase their job security. We hypothesize that the labor relations climate between the company and union in the bargaining unit has an important impact on how the union membership perceive these issues. In particular, it is predicted that the more hostile or adversarial the relationship is, the lower the percent Yes vote will be. The negative and statistically significant coefficient on the variable REL3 supports this prediction. The coefficient for REL2 is also negative, though statistically not significant. One implication, therefore, is that a company is more likely to win support for a concession if it has established a cooperative, nonadversarial relationship with the union than if it

⁸ In addition to obtaining an estimate of the percentage change in employment over the preceding year, the survey questionnaire also asked the chairperson whether the bargaining unit's employment had "increased," "remained the same," "decreased somewhat," or "decreased a lot." The responses were coded as dummy variables and used in the regression equations in place of EMQ. (The category "increased" was omitted from the equation to serve as the reference group.) The estimated coefficients were all negative and statistically significant. Each of the dummy variables was also interacted with the variable SAVE. All of the interaction terms were positive and statistically significant.

⁹ If SAVE = 1, however, the regression results indicate that type C plants are less likely to vote for concessions, contrary to the predictions of the model. This problem, we believe, is not serious, since of the twelve plants in the sample that had EMP > 0, only two also had SAVE = 1.

¹⁰ It can be argued that the effect of a threatened plant closing on the percent Yes vote should also depend on whether the membership thought the concessions would save jobs. To test this possibility, we included interaction terms CLOSE2*SAVE and CLOSE3*SAVE in the regression. The coefficients on these interaction terms were positive and statistically significant, but the coefficients on CLOSE2 and CLOSE3 fell to insignificance. The rest of the coefficients remained largely unchanged from those reported in Table 2.

has not. A second important determinant of the membership's perceptions of the benefits and costs of a concession is the position of the chairperson of their bargaining unit with respect to the concession. The sign on the variable *SUPPORT* is negative and statistically significant. This finding indicates that the percent Yes vote was lower where the chairperson opposed the concession.

Additional variables in the model, to control for differences across plants, are *YEAR*, *PARTS*, *WCOLLAR*, and *OTHER*. Consider first the variable *YEAR*. The regression results indicate that the newer the plant, the lower was the percent Yes vote. At first glance this result seems to contradict the median voter model, since it predicts that workers in more secure jobs (such as in new plants) would vote for the concessions in order to avoid even larger concessions in the future. As was pointed out earlier, however, the incentive for workers with secure jobs to vote for the concessions is greatly reduced when they do not face the threat of repeated elections. We argued that one mechanism used by the UAW leadership to gain a Yes vote in this situation was to "bribe" secure workers with additional benefits, such as the Guaranteed Income Stream program. For workers in new plants, however, this inducement was probably not effective, since they did not have the seniority to qualify for the program; hence, as the regression indicates, they voted against acceptance of the concessions.

Next consider the variables *PARTS*, *WCOLLAR*, and *OTHER*. Although workers in parts plants were especially vulnerable to layoff because of outsourcing, the insignificant coefficient on the variable *PARTS* suggests that once previous trends in employment, the threat of plant closure, and the likelihood of jobs being saved by the concessions are controlled for, there was no net difference between the voting behavior of workers in these plants and that of workers in assembly plants. Other things equal, however, white-collar workers and "other" workers were more likely to vote for the concessions than were assembly workers. It might be

conjectured that this result reflects a less antagonistic attitude toward the company on the part of these workers relative to production workers, but such an explanation is weakened by the fact that a variable measuring the labor relations climate in the bargaining unit is already included in the regression.

The final two variables included in the regression are *UN* and *WAGE*. The model predicts that the attitude of the membership toward a concession should be influenced by their alternative employment and income opportunities—the better those opportunities, the lower the support for the concession.¹¹ Therefore, the unemployment variable was expected to take a positive sign and the wage variable a negative sign. The sign on each variable, however, is the opposite of that predicted, and both coefficients are statistically significant.¹² One possible explanation for these inconsistent results is that the information used for these two variables is very aggregated. For this reason, it may be that these two variables, rather than serving as proxies or the actual employment opportunities facing General Motors workers, are picking up regional differences across plants.

Conclusion

Concession bargaining has been one of the most important industrial relations developments of the 1980s. Surprisingly, however, there has been little research on

¹¹ Another determinant of the alternative income available to workers should they lose their job is the level of unemployment benefits. An unemployment benefits variable was not included in the regression, however, since *SUB* payments from the company equalized total benefits at 95 percent of take-home pay across all states, eliminating any variation in this variable. This statement must be qualified slightly, since some workers in April 1982 were not receiving full *SUB* payments due to depletion of the fund, but no data are available on the incidence of such underpayment across plants.

¹² To test the robustness of the regression, we dropped the variables *UN* and *WAGE* from the equation and then reestimated it. The results (available from the authors on request) were quite similar.

the factors that determine whether a union will agree to accept concessions. In this paper we attempt to provide both theoretical and empirical evidence on this subject, through an analysis of the 1982 GM-UAW negotiations. The paper shows that in a multiplant company such as General Motors, there is likely to be a considerable divergence of opinion among the union membership over the desirability of a concession, reflecting the unequal distribution across plants of the benefits and costs of a wage cut.

To analyze this divergence of opinion, we used the median voter model to derive hypotheses concerning the pattern of voting among plants for a concession contract. Contrary to conventional wisdom, the model predicts that in many cases workers in plants that have experienced a large number of layoffs are the ones most likely to vote against concessions, whereas workers in plants with

steady employment levels are more likely to vote for the concession. The empirical analysis of the voting data from the GM-UAW contract ratification in 1982 lends considerable support to these hypotheses. As predicted, the strongest opposition to the concessions came from plants that had suffered large layoffs and in which the membership did not believe the concessions would save jobs. Where the membership did believe that jobs would be saved by a cut in labor cost, however, the vote was much more in favor of concessions. The regression results also indicate that, surprisingly, the vote for acceptance of the concessions was higher in bargaining units where employment had remained steady or had increased during the previous twelve months. Finally, we also found, as hypothesized, that support for the concessions was greater in plants where the company and union had a cooperative relationship.

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